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# State of Utah

DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

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Mineral file

May 21, 1990

Mr. Glenn M. Eurick  
Environmental Affairs Coordinator  
Barrick Mercur Gold Mine  
P.O. Box 838  
Tooele, Utah 84074

*glu*  
Dear Mr. Eurick:

Re: Notice of Tentative Approval for Permit Revision, Barrick Mercur Sunrise Waste Rock Dump & Dump Leach Area No. 3, M/045/017-88(1), Tooele County, Utah

The Division has completed its review of Barrick's March 15, 1990 revised application for the Sunrise Waste Rock Dump & Dump Leach Area No. 3 permit revision. Barrick has now adequately addressed the majority of the Division's technical concerns. The revision application has been determined complete enough to proceed with issuance of tentative approval. The Division will now prepare and publish notice of a 30-day public comment period.

This tentative approval is conditioned upon successful resolution of the following concerns during the 30-day public comment period:

## R613-004-106.2 - Operation Plan

The Division will require Barrick to perform a series of initial acid-base potential analyses on identified sulfide-bearing waste material to be placed on the Sunrise dump. If these evaluations prove that the sulfide contamination is significant (i.e., < -5 tons CaCO<sub>3</sub>/1000 tons material), then these waste materials may require selective handling. If the preliminary acid-base potential analyses of typical sulfide-bearing waste rock encountered during pit development prove insignificant, then future sampling may be suspended by the Division.

Barrick must provide the Division with a conceptual sampling plan that will be used once sulfide-bearing ore and waste rock is encountered in the pit. The plan should include information that identifies the geologic origin of the sulfide-bearing waste

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material tested, its stratigraphic occurrence with respect to the ore & how the sample was obtained. The analytical results of the acid-base potential of the sulfide-bearing waste rock, and records of any selective waste rock handling must be provided to the Division as part of Barrick's annual report.

#### R613-004-107.5 - Soils

Page 49 of the MRP indicates that a silt fence will be installed north of topsoil stockpile T15 to help protect it from drainage. Since this topsoil stockpile sits in the middle of the Dead Horse Canyon drainage, the Division will require that Barrick install something more substantial than a silt fence to divert drainage away from the stockpile. The Division suggests that a rip-rapped earthen berm be constructed in place of, or to supplement this structure.

The recently revised Map 2.4-1, Final Reclamation Plan, and Map 2.4-2, Post Reclamation Configuration, fail to show the location of existing topsoil stockpile T9, or the proposed location for stockpile T18. These maps should be updated to show the intended location of stockpile T18.

All topsoil stockpile volumes should be indicated in the plan narrative. Topsoil stockpiles T18, T13 and T15 are given volumes in the plan. What are the volumes, each, for stockpiles T1, T2, T3, T4, T5, T6, T7, T7(a), T8 and T17.

The plan indicates (page 51b) that 908,398 cu. yds. of topsoil have been stockpiled as of December 31, 1988. This figure is not consistent with the 606,695 cu. yd. figure described in Barrick's 1988 Annual Report. What is the correct figure?

On page 51b, of the plan, a figure of 1,091,194 cu. yds. is given for the volume of topsoil needed at final reclamation. This figure is inconsistent with 1,495,551 cu. yds. given on page 60 of the plan (table 2-4-3). If a total of 908,398 cu. yds. exists, at this time, this leaves a deficit of 182,796 cu. yds. in case one above, and 587,153 yds. in the second case. Barrick must correct these inconsistencies.

Also, the Division requests an explanation of how Barrick plans to resolve the deficit question. Barrick will need to insert language into the MRP explaining what will be done to compensate for the deficit. Will Barrick make this up through future topsoil salvage or subsoil salvage; or will alternate technology be used for amending waste or overburden material where topsoil deficiencies remain?



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R613-004-109 - Impact Assessment

Barrick needs to update the Wildlife Mitigation section of the plan. It is our understanding that the tailings pond has been the source of several deer and elk mortalities. During an August 1989 meeting between the Division of Oil, Gas and Mining, Wildlife Resources and Barrick, the operator committed to implement a set of on site mitigations, to prevent further mortalities. Apparently, these mitigation procedures have been activated on the property. Barrick must formally include these mitigations as part of the updated MRP. These changes could be inserted onto page 62 of the existing MRP.

R613-004-110 - Reclamation Plan

The final reclamation plan indicates that the access road/diversion channels will remain to the east and west of Dump Leach #3. The Division has a concern regarding the long-term stability of the 10-foot wide diversion channels and the potential for water erosion into Dump Leach #3. Will the diversions be armored, situated in bedrock, asphalted or otherwise lined to minimize erosional impacts? Barrick must provide the design details for these diversions to the Division for approval.

Barrick's final reclamation proposal to allow surface runoff from upper Meadow and Dead Horse Canyon ephemeral drainages to impound behind Dump Leach #3 is not acceptable to the Division. Given the storage capacity of the two impoundment areas (@62 acre-ft. each), the Division questions the wisdom of potentially storing this amount of water behind the Dump Leach #3. A potential infiltration problem may exist over the long term into and/or through the Dump. It is our recommendation that Barrick design these structures to be free draining to permit unrestricted flow of surface runoff around Dump Leach #3 to the bottom of Meadow Canyon. The design details must be provided to and approved by this Division.

R613-004-111 - Reclamation Practices

No definitive reclamation plan has yet been proposed for the tailings pond. At this time, it is questionable what the reclamation requirements might be for this facility upon final closure of the mine site. Barrick must address this deficiency in the MRP, by committing to provide a detailed tailings pond reclamation plan to the Division at least 12 months prior to ultimate mine closure.

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Barrick should also commit to researching various types of reclamation in preparation for actual tailings reclamation at mine closure.

R613-004-113 - Surety

The Division has performed a preliminary assessment of Barrick's reclamation cost estimate. The calculations and methods used to compute the reclamation costs are reasonable and will likely be found acceptable. However, Barrick's annual financial report is currently being evaluated by our auditing staff and a recommendation on meeting the self-bonding qualifications will not likely be available until early June.

Provided no substantive comments are received by the Division during the 30-day public comment period, and the appropriate conditions have been resolved, the Division's tentative decision will become final. The Board of Oil, Gas and Mining must accept the revised amount and form of reclamation surety prior to the Division's issuance of final approval.

As always, the Division's approval is also conditioned upon Barrick's receipt of all other applicable clearances and/or regulatory approvals prior to commencement of construction activities. The Division appreciates your patience and continued cooperation in completing this permitting action.

Sincerely,



Lowell P. Braxton  
Associate Director, Mining

Attachment

DWH/jb

cc: Don Ostler, State Health  
Howard Hedrick, BLM, Pony Express RA  
Jerry Mansfield, State Lands  
Brian Buck, JBR  
Minerals Staff

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